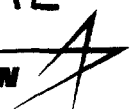


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Charles M. Kupperman  
Vice President  
Washington Operations  
Space and Strategic Missiles Sector

CC Doc 92297

June 3, 1996

VIA HAND DELIVERY

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

RECEIVED

JUN - 3 1996

Re: LMDS/GSO FSS Sharing in  
the 29.240-29.375 GHz Band

Dear Mr. Caton:

Lockheed Martin Corporation ("Lockheed Martin") hereby respectfully advises the Commission that Lockheed Martin and Texas Instruments have been unable to achieve a satisfactory agreement concerning sharing criteria that would permit LMDS systems and GSO FSS gateways to operate on a co-primary basis in the 29.240-29.375 GHz band.

The record in this proceeding shows that prior to last week, Lockheed Martin and Texas Instruments held different views on a number of critical sharing issues that needed to be resolved before LMDS systems and GSO FSS gateways could co-exist in the affected frequency band. On May 30, 1996, the two companies met for the purpose of discussing options for resolving these issues. However, as a result of new and quite onerous requirements identified for the first time by Texas Instruments at the May 30 meeting, Lockheed Martin has now concluded that it is not feasible for LMDS and GSO FSS gateways to share spectrum under Band Plan 4' ("four prime").

Several weeks ago, the Commission urged Lockheed Martin and Texas Instruments to work cooperatively to determine whether sharing rules could be achieved that would permit LMDS and GSO FSS gateways to operate on a co-primary basis under Band Plan 4' in the frequency range 29.240-29.375 GHz. On April 29, 1996, Lockheed Martin submitted its proposed sharing rules. This proposal was a genuine attempt to find a way to share this part of the spectrum in a manner that would make it usable for GSO FSS gateway operations, such as those proposed by Lockheed Martin for its Astrolink system, yet would adequately protect LMDS hub stations and thereby allow subscriber-to-hub transmissions in this portion of the spectrum. In proposing sharing rules, Lockheed Martin was prepared to accept a disproportionately large

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part of the sharing burden, which was represented in the single-entry PFD limit value of  $-95 \text{ dBW/m}^2/\text{MHz}$  that it proposed in order to protect the LMDS hub stations. This value was calculated using the agreed-upon analysis techniques used in the 28 GHz Negotiated Rulemaking Committee. This PFD limit would preclude GSO FSS from operating in the vicinity of an LMDS hub station, with the exact separation distance depending on many factors, such as GSO FSS satellite elevation, GSO FSS earth station characteristics and GSO FSS transmit EIRP levels.

On May 2, 1996, Texas Instruments submitted a letter to the FCC stating, among other things, that the aggregate PFD limit would have to be 3 dB lower than the single-entry value proposed by Lockheed Martin, requiring an aggregate PFD limit value of  $-98 \text{ dBW/m}^2/\text{MHz}$ . Although this was a setback, it appeared that a mutually-acceptable solution might still be achieved.

Subsequently, on May 30, 1996, at Texas Instruments' request, Lockheed Martin met with Texas Instruments and representatives of the Commission's International and Wireless Bureaus, to discuss the sharing conditions in more detail. At the meeting Texas Instruments presented a new analysis of the sharing situation, which required a further 12.6 dB reduction in the aggregate PDS limit value, to a new value of  $-110.6 \text{ dBW/m}^2/\text{MHz}$ . This value is now 15.6 dB more stringent than the value proposed by Lockheed Martin. Furthermore, Texas Instruments now believes that it must add an additional margin of 13 dB to convert this aggregate value to an acceptable single-entry value. This results in a 28.8 dB difference in the PFD limit values proposed by Lockheed Martin compared to those that Texas Instrument would find acceptable. Such a difference would increase the required separation distance by a factor of twenty-seven (27) times, and therefore makes it no longer feasible for Lockheed Martin to operate its proposed gateway services in this band if required to accommodate Texas Instruments in accordance with such rules.

Texas Instruments also informed Lockheed Martin that it would not be possible for LMDS operators to identify the location of the LMDS hub stations until they have developed detailed system deployment plans. This might result in an indefinite delay in determining these locations, thereby preventing the GSO FSS operators from developing gateway earth stations with any certainty that they would not be required to cease transmissions in the future when the LMDS operator might implement a new hub station. Again, this requirement would prevent Lockheed Martin from deploying and operating a commercially viable gateway service in this shared spectrum.

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Lockheed Martin is disappointed that its efforts to find a reasonable compromise to the LMDS sharing issue have been thwarted by Texas Instruments. Unfortunately, inflexibility on the part of certain LMDS applicants has become the dominant characteristic of this proceeding. Although the GSO FSS applicants, including Lockheed Martin, clearly would have preferred that the Commission's proposed band plan, announced last summer in the Third NPRM, reflect the long-standing assumption that this band would serve as expansion spectrum for fixed satellite services, the Commission instead decided that the 28 GHz band could, and would, be shared with terrestrial services. Lockheed Martin has been particularly accommodating to this approach; indeed, we virtually designed the Astrolink system based upon the proposed plan. Moreover, for the better part of a year, we and other GSO FSS applicants have continued to demonstrate our willingness to reach a satisfactory resolution of issues related to sharing the 28 GHz band. It now appears that no amount of flexibility will satisfy certain LMDS interests, except perhaps for the ultimate flexibility to render fixed Ka-band satellite proposals economically non-viable.

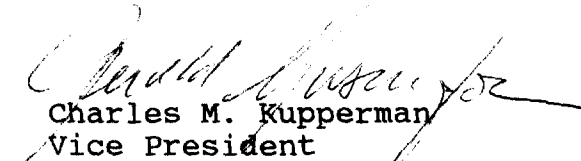
Lockheed Martin notes that a broad coalition of interests representing the various competing services, including LMDS, GSO FSS, NGSO FSS and MSS Feeder Links, submitted a letter to the Commission today urging adoption of the band segmentation plan originally proposed by the Commission in the Third NPRM. Lockheed Martin endorses the views set forth by these parties as an important development toward resolving the longstanding controversy surrounding this proceeding.

We believe the Commission has no responsible choice but to adopt either its original proposal or some close variant thereof (e.g., Band Plan 1' ("one prime")) in order to provide GSO FSS systems with the 1 GHz of spectrum they require. Any alternative action would undermine implementation of U.S. Ka-band GSO FSS systems and, as a consequence, impede the prompt realization of this Administration's vision of a global information infrastructure. The existing worldwide Ka-band GSO FSS allocation is a rare global resource, and it must not be further compromised by unreasonable domestic terrestrial requirements for the Fixed Service, especially when alternative frequency bands, such as those identified in Band Plan 1', are available and equally suitable for terrestrial operations (see Hewlett Packard letter to Jennifer Warren, dated May 17, 1996).

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Lockheed Martin strongly urges the Commission to proceed promptly with the adoption of either Band Plan 1 or 1'.

Respectfully submitted,

  
Charles M. Kupperman  
Vice President  
Washington Operations  
Space and Missiles Sector

CK/db

cc: FCC Chairman Reed E. Hundt  
Commissioner James H. Quello  
Commissioner Susan Ness  
Commissioner Rachelle B. Chong  
Blair Levin  
Ruth Milkman  
Jackie Chorney  
Lauren J. Belvin  
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Robert James  
Jennifer Warren